

# GANP Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51336

## Product Information

Application	WB, IHC-P
Primary Accession	<a href="#">O60318</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	218405

## Additional Information

Gene ID	8888
Other Names	Germinal-center associated nuclear protein, GANP, 80 kDa MCM3-associated protein, MCM3 acetylating protein, MCM3AP, 231-, MCM3 acetyltransferase, MCM3AP, GANP, KIAA0572, MAP80
Dilution	WB~~1:1000 IHC-P~~N/A
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

## Protein Information

Name	MCM3AP
Synonyms	GANP, KIAA0572, MAP80
Function	[Isoform GANP]: As a component of the TREX-2 complex, involved in the export of mRNAs to the cytoplasm through the nuclear pores (PubMed: <a href="#">20005110</a> , PubMed: <a href="#">20384790</a> , PubMed: <a href="#">22307388</a> , PubMed: <a href="#">23591820</a> ). Through the acetylation of histones, affects the assembly of nucleosomes at immunoglobulin variable region genes and promotes the recruitment and positioning of transcription complex to favor DNA cytosine deaminase AICDA/AID targeting, hence promoting somatic hypermutations (PubMed: <a href="#">23652018</a> ).
Cellular Location	[Isoform GANP]: Nucleus envelope. Nucleus, nuclear pore complex. Nucleus, nucleoplasm. Chromosome. Note=Predominantly located at the nuclear envelope, facing the nucleus interior (PubMed:20005110, PubMed:21195085, PubMed:23591820). Localization at the nuclear pore complex requires NUP153, TPR and ALYREF/ALY (PubMed:22307388, PubMed:23591820). Also found associated with chromatin (PubMed:23652018). In B-cells, targeted to

the immunoglobulin variable region genes (PubMed:23652018).

**Tissue Location**

Widely expressed (PubMed:11024281). Up-regulated in germinal center B-cells in tonsils (at protein level) (PubMed:11024281).

## Background

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Isoform GANP: Essential for the generation of high- affinity B-cells against T-cell-dependent antigens by affecting somatic hypermutation at the IgV-regions. May have stimulation- dependent DNA primase activity that would generate extra RNA primers in very rapidly proliferating cells and would support clonal expansion of differentiating B-cells (By similarity). Involved in the nuclear export of poly(A)-containing mRNAs by acting as a scaffold for the TREX-2 complex. The TREX-2 complex functions in docking export-competent ribonucleoprotein particles (mRNPs) to the nuclear entrance of the nuclear pore complex (nuclear basket). TREX-2 participates in mRNA export and accurate chromatin positioning in the nucleus by tethering genes to the nuclear periphery.

## References

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Hattori M.,et al.Nature 405:311-319(2000).  
Nagase T.,et al.DNA Res. 5:31-39(1998).  
Takei Y.,et al.J. Biol. Chem. 273:22177-22180(1998).  
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